

Remarks

Claims 1, 3-10 and 22 are pending in the present application. Claim 1 has been amended by incorporating claims 5 and 9 thereinto. Accordingly, claims 5 and 9 are canceled herein. Entry of the foregoing amendments and reconsideration are respectfully requested.

At pages 2-4 of the Office Action, the Examiner rejected claims 1, 3-10 and 22 under 35 USC § 103 as being unpatentable over Niemi in view of Masters.

The Examiner's position is essentially that Niemi teaches a high water dentifrice composition comprising a silica abrasive and a silica thickener, but fails to disclose the "claimed percentages of abrasive silica or thickener and claimed viscosities" (see the Office Action at page 3) and further fails to disclose the microcrystalline cellulose ("MCC"). The Examiner cites Masters for disclosing a silica dentifrice comprising MCC (to reduce stringiness) and the presently claimed viscosities. Therefore, the Examiner concludes the present invention is a mere optimization of the amounts of the silica abrasive/thickener and claimed viscosities based on the combination of references.

Applicants respectfully traverse the foregoing rejection and respectfully request reconsideration thereof.

Niemi is directed to specific high water dentifrice compositions having a viscosity greater than 200,000 cP, a silica abrasive in an amount of 8-18%, and a silica thickener in an amount of 8-15%. The specific composition is disclosed by Niemi to provide a high water dentifrice that has acceptable stability, mouthfeel and rheological properties (see the Abstract) that overcomes the problems in the art associated with high water dentifrices.

There is no disclosure or suggestion in Niemi that one could obtain a stable high water toothpaste: (1) containing both a silica abrasive in an amount less than 15% and a silica

thickener in an amount of 1 to 7%; (2) containing MCC to assist in reducing abrasivity; and (3) having a viscosity in an amount less than 200,000 cP.

Applicants respectfully submit that Masters does not cure the foregoing deficiencies in Niemi.

Masters discloses a silica toothpaste composition having 15-30 wt% silica abrasive and the use of MCC to reduce stringiness in such a composition. As a result, similar to Niemi, Masters also fails to disclose both a silica abrasive in an amount of less than 15% and silica thickener in an amount of 1 to 7%. Neither Niemi nor Masters suggest that the amounts of the silica abrasive and silica thickener are interchangeable with other formulations. Further, there is no suggestion in Masters that MCC should or could be used (to reduce stringiness) in formulations other than those disclosed in Masters.

The Examiner refers to col. 2, lines 16-22, as disclosing the presently claimed toothpaste viscosity. However, Applicants point out that col. 2, lines 16-22, of Masters refers to the viscosity properties of the MCC, not the viscosity of the toothpaste composition in the present claims. As a result, Masters does not teach anything about the viscosity of the toothpaste composition. On the other hand, Niemi clearly teaches that the toothpaste composition disclosed therein must have a viscosity greater than 200,000 cP. As a result, the combination of Niemi and Masters do not teach or suggest that the presently claimed high water toothpaste composition having a viscosity less than 200,000 cP could be stable (and have reduced abrasivity).

The Examiner takes the view that one skilled in the art would have been motivated to mix and match the teachings in the references so as arrive at the presently claimed invention with a reasonable expectation of success because the amounts of the abrasive silica and silica

thickener are mere “optimizations” that would have been obvious to one of ordinary skill in the field (see the Office Action at page 3).

However, Applicants respectfully submit that the level of skill in the field of high water silica toothpastes is, contrary to the Examiner’s position, unpredictable and that one skilled in the art would not have known, with a reasonable expectation of success, that modifying the amounts of the silica abrasive and silica thickener disclosed in Niemi and Masters, in combination with a lower viscosity, could lead to the stable high water toothpaste of the present invention having reduced abrasivity. For example, Niemi teaches:

Given the economics involved, the dentifrice compositions ideally would contain as high a water fraction as possible without sacrificing the needed performance and aesthetics. Nonetheless, the notion of significantly increasing the water content per se of a dentifrice raises concerns of undermining, for example, the stability and uniformity of the dentifrice formulation, its ability to retain its body and shape without experiencing inordinate sagging when extruded upon toothbrush bristles in order to sufficiently sit on the bristles, or the tendency of the formulation not to readily seep out of the dispenser tube when opened. In practice, merely increasing the water content in conventional dentifrice formulations, all other things kept equal, has been observed to have a deleterious impact on stability, mouthfeel and rheological properties.

See col. 1, lines 44-58. Emphasis added.

Niemi is clearly teaching that the stability of high water toothpaste systems is very unpredictable and formulation specific. As a result, Niemi teaches that one skilled in the art would not have known what to expect by varying the components and amounts in a given high water toothpaste composition. There is no suggestion in either of the references that one could modify the references and obtain the stable toothpaste formulation of the present invention having reduced abrasivity and lower viscosity.

For example, the Examiner’s attention is directed to Examples 16, 17 and 18 in the present application demonstrating the stability and acceptable Cuban values obtained by the

high water dentifrice composition of the present invention. Niemi clearly supports the unexpected nature of such findings.

In view of the foregoing, it is respectfully submitted that the presently claimed invention is unobvious and patentable over the cited art. Accordingly, withdrawal of the foregoing rejection is respectfully submitted.

Early, favorable action is earnestly solicited.

Respectfully submitted,

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